

A new *Chinattus* species (Araneae: Salticidae) from Amami-Ôshima Island, Japan

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Abstract — A new salticid species of the genus *Chinattus* is described as *Chinattus falco* sp. nov. For the present, this species is known from only Amami-Ôshima Island, Japan. The new species can be distinguished from other congeners by the male palp with not-hooked retrolateral tibial apophysis and epigyne with slender scape.

Key words — Taxonomy, Ryukyu Islands, epigynal scape, epigynal cavity

Chinattus Logunov 1999 is a salticid spider genus mainly distributed in China, Japan, Taiwan, Vietnam, Nepal and Central Asian countries (World Spider Catalog 2016). From Japan, three species have been recorded so far (Suguro 2014). In Amami-Ôshima Island, southern Japan, Hikaru Ishii from Tokyo University of Agriculture and Technology studied terrestrial arthropod fauna of forests by putting adhesive traps on forestry road. From the materials collected by his traps, several specimens were confirmed to be an undescribed species of the genus *Chinattus* although the specimens were damaged. On the basis of the locality data of trap samples, I collected the fresh specimens at the same locality to describe a new *Chinattus* species.

Specimens were preserved in 80% ethanol, and their morphological features were observed under Olympus SZH10 stereomicroscope. The type specimens are deposited in the collection of the Department of Zoology, National Museum of Nature and Science, Tokyo.

The following abbreviations are used: ALE, anterior lateral eye; AME, anterior median eye; PLE, posterior lateral eye; PME, posterior median eye; RTA, retrolateral tibial apophysis.

Measurements are given in mm, measurements in parentheses indicate the range among specimens examined. Measurements of legs are given in the following format: [femur + patella + tibia + metatarsus + tarsus = total].

Genus *Chinattus* Logunov 1999

[Japanese name: Kanoko-haetorigumo-zoku]

Chinattus falco sp. nov.

[Japanese name: Hayabusa-kanoko-haetori]

(Figs. 1–10)

Type materials. Holotype: ♂, Mt. Yuwandake, Amami-Ôshima, Kagoshima Pref., Japan, 1-IX-2015, T. Suguro leg.

(NSMT-Ar 14587). Paratypes: 4♂3♀, same locality and collector as the holotype, 1-IX-2015 (3♂1♀), 4-IX-2015 (1♂2♀) (NSMT-Ar 14588–14594) (3♀ were collected as juveniles and reared until becoming adults about one month later).

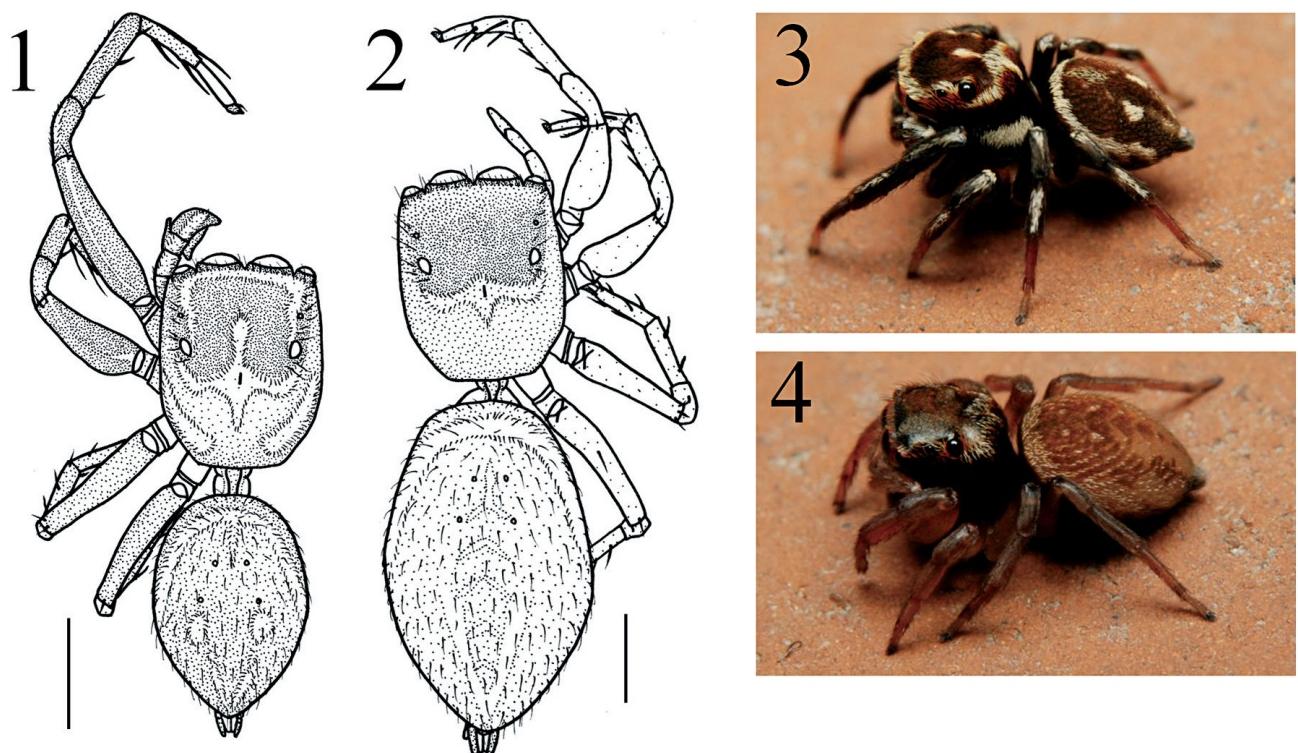
Other specimens examined. 6♂, same data as holotype.

Diagnosis. Males of this species resemble those of *C. sinensis* (Prószyński 1992) and *C. validus* (Xie, Peng & Kim 1993) in palpal morphology, but are distinguished from the latter by not-hooked RTA (Figs. 6–7) and white band on anterior margin of abdomen. Females of this species are easily distinguished from those of known other congeners by epigyne with slender scape (Figs. 8–9).

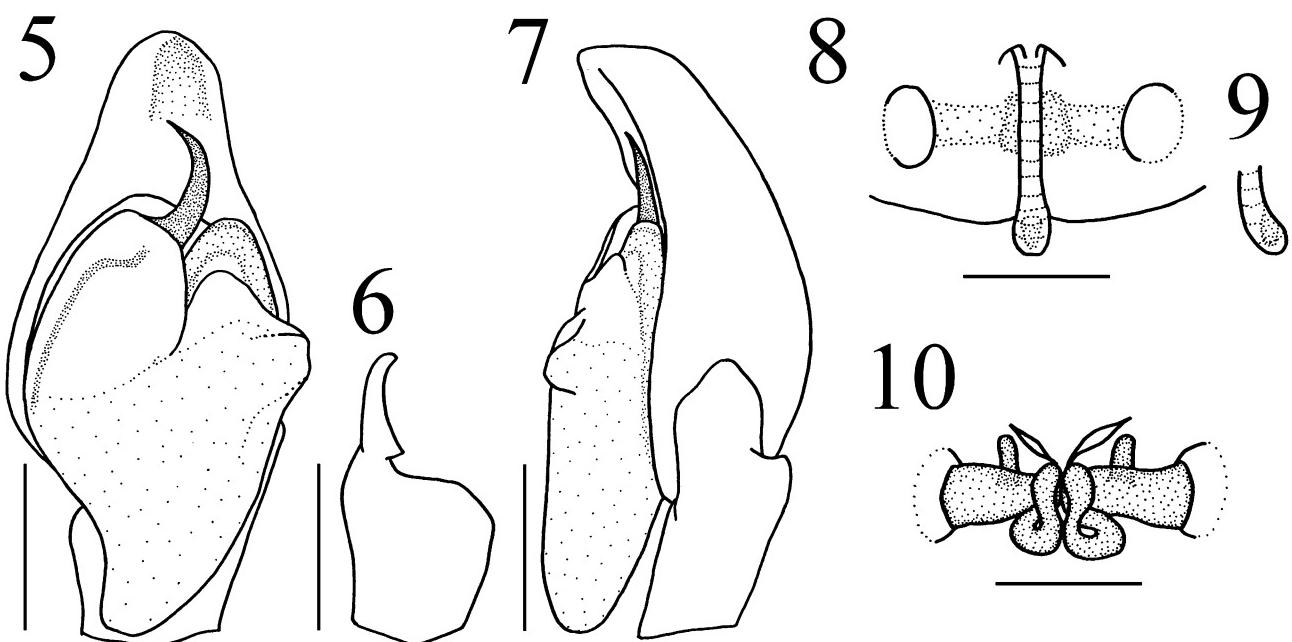
Description. *Male* (NSMT-Ar 14587, holotype, Fig. 1). Measurements. Body 4.43 (4.28–4.98) long; carapace 2.28 (2.25–2.60) long; 1.68 (1.64–1.90) wide; 1.34 (1.28–1.44) high; abdomen 2.15 (1.98–2.38) long; 1.60 (1.46–1.76) wide. Eye field: eye row I 1.64 (1.62–1.84) wide; eye row II 1.48 (1.48–1.70) wide; eye row III 1.48 (1.46–1.68) wide; eye row I 1.06 (1.02–1.18) long; distance between eye row I and II / length of eye row 0.60 (0.56–0.60); width of eye row I / width of eye row III 1.11 (1.09–1.12); AME diameter 0.48 (0.47–0.55); ALE / AME 0.62 (0.61–0.67); ALE / PLE 1.29 (1.25–1.43); PME / PLE 0.36 (0.32–0.36). Length of legs: I 1.58 + 0.96 + 1.24 + 0.90 + 0.58 = 5.26; II 1.12 + 0.70 + 0.72 + 0.66 + 0.40 = 3.60; III 1.52 + 0.74 + 0.86 + 0.96 + 0.42 = 4.50; IV 1.36 + 0.56 + 0.82 + 1.04 + 0.44 = 4.22.

Carapace moderately high, height / width 0.80 (0.76–0.80), with short longitudinal fovea. Clypeus relatively low, clypeal height / AME diameter 0.21 (0.20–0.27). Chelicera short, with two promarginal and one retromarginal teeth. Leg I rather long, length of leg I / width of carapace 3.13. Spination of legs as shown in Table 1. Abdomen oval.

Palp (Figs. 5–7). Embolus dagger-like and curved inwardly. Genital bulb weakly expanded posteriorly. RTA broad and flattened, slightly bending inwardly, with small



Figs. 1–4. *Chinattus falco* sp. nov. 1, 3, male habitus; 2, 4, female habitus. (1, 3, NSMT-Ar 14587; 2, 4, NSMT-Ar 14588.) Scales = 1.0 mm.



Figs. 5–10. *Chinattus falco* sp. nov. 5–7, male palp (5, ventral view; 6, tibia, dorsal view; 7, retrolateral view); 8–9, epigyne (8, ventral view; 9, scape, left lateral view); 10, female internal genitalia, dorsal view. (5–7, NSMT-Ar 14587; 8–10, NSMT-Ar 14588.) Scales = 0.2 mm.

Table 1. Spination of legs of *Chinattus falco* sp. nov. (dorsal / ventral; none=no spine, r=retrolateral, p=prolateral).

| Leg | | Femur | Patella | Tibia | Metatarsus |
|-----|---|-----------|------------|------------------------|----------------------------|
| I | ♂ | 1/none | none/none | none/1,1r-1,1r-1p-1,1r | none/2-2 |
| | ♀ | 2/none | none/none | none/2-2-1p-2 | none/2-2 |
| II | ♂ | 2/none | none/none | none/1-2-1p-2 | none/2-2 |
| | ♀ | 2/none | none/none | none/1-2-1p-2 | none/2-2 |
| III | ♂ | 2/none | none/none | 2-1p,1r-0/0-0-2 | 2-2/2-2 |
| | ♀ | 2,1p/none | 1p,1r/none | 1p,1r-1p,1r-0/0-0-2 | 2-0-2-1p,1r/0-2-0-2 |
| IV | ♂ | 1/none | 1r/none | none/1r-1p,1r-1 | 2-2/1p-2 |
| | ♀ | 1-1/none | none/none | 1p,1r-1p,1r-0/0-0-1 | 1p,1r-1,1r-2-1p,1r/1-0-0-1 |

invagination on dorso-basal part.

Coloration and markings (Figs. 1, 3). Carapace mostly dark brown, covered with sparse black and brown hairs, rather brighter on upper part of thoracic part, bearing some white haired markings: stripes on front and lateral margins of eye field; transverse stripe on clypeus; flying-bird-shaped (falcon-shaped) marking on the middle of carapace; paired bands on retrolateral side of thoracic part. Eye field blackish brown, covered with dense brown hairs, surrounded by sparse black setae and orangy brown hairs. Eyes surrounded by orange and white thick hairs. Clypeus brown with black and white long hairs. Chelicera reddish brown. Labium, maxilla and sternum dark greyish brown. Dorsum of abdomen dark greyish brown, covered with black and reddish brown hairs, bearing some white haired markings: reverse U-shaped band along anterior margin; a pair of spots on nearby the middle; weak V-shaped marking on posterior end. Venter greyish brown, covered with greyish brown hairs. Spinnerets greyish brown. Leg I dark brown except yellowish brown tarsus. Leg II dark greyish brown on femur, brown on patella and venter of tibia, yellowish brown on dorsum of tibia and whole of metatarsus and tarsus. Legs III and IV dark greyish brown on femur, greyish brown on venter of patella and tibia, yellowish brown on dorsum of patella and tibia, whole of metatarsus and tarsus. Each leg with thin white haired stripe on venter of patella and tibia. Palp mostly dark brown, rather brighter in tibia, covered with sparse black hairs, dorsally with white haired stripe on distal end of femur to cymbium. Genital bulb greyish brown. Embolus black.

Female (NSMT-Ar 14588, one of paratypes, Fig. 2). Body 6.00 (5.50–6.00) long; carapace 2.45 (2.43–2.63) long; 1.84 (1.84–2.00) wide; 1.44 (1.38–1.52) high; abdomen 3.55 (3.08–3.55) long; 2.63 (2.30–2.63) wide. Eye field: eye row I 1.78 (1.74–1.90) wide; eye row II 1.64 (1.62–1.72) wide; eye row III 1.64 (1.64–1.76) wide; eye row I.10 (1.10–1.16) long; distance between eye row I and II / length of eye row 0.56 (0.55–0.56); width of eye row I / width of eye row III 1.09 (1.06–1.09); AME diameter 0.52 (0.52–0.55); ALE / AME 0.61 (0.61–0.64); ALE / PLE 1.27 (1.24–1.27); PME / PLE 0.33 (0.29–0.33). Length of legs: I 1.30 + 0.90 + 0.92 + 0.68 + 0.46 = 4.26; II 1.22 + 0.84 + 0.76 + 0.62 + 0.42 = 3.86; III 1.68 + 0.82 + 0.92 + 1.00 + 0.48 = 4.90; IV 1.58 + 0.68 + 0.96 + 1.14 + 0.48 = 4.84.

Carapace moderately high, height / width 0.78 (0.75–0.78), with short longitudinal fovea. Clypeus relatively low, clypeal height / AME diameter 0.19 (0.19–0.21). Chelicera short, with two promarginal and one retromarginal teeth. Spination of legs as shown in Table 1. Abdomen oval.

Genitalia (Figs. 8–10). Epigyne with slender scape and round distinct copulatory openings. Scape apically with cavity. Internal canals transversal, with a pair of longitudinal distinct glandular ducts. Spermathecae meandering on the middle.

Coloration and markings (Figs. 2, 4). Carapace mostly dark reddish brown, covered with sparse black and brown hairs, bearing flying-bird-shaped marking made of grey hairs on the middle of carapace. Eye field dark brown, covered with dense brown hairs, surrounded by sparse black setae. Eyes surrounded by thick brown hairs. Clypeus brown with black and white long hairs. Chelicera reddish brown. Labium and maxilla brown. Sternum greyish brown. Dorsum of abdomen greyish brown, covered with black and orangy brown hairs, with reverse U-shaped band made of white hairs on front, bearing several chevrons and weak V-shaped marking made of not-pigmented part. Venter greyish brown, covered with sparse greyish brown hairs. Spinnerets greyish brown. Legs entirely bright brown. Palp bright brown and covered with long white and grey hairs on patella, tibia and tarsus.

Distribution. Japan (Amami-Ôshima Island). Collected on the groundcover in edge of primary forest.

Remarks. Males and females are considered conspecific because no other candidates were collected at the type locality. Also they share the similar markings on the rear of abdominal dorsum.

Compared with other congeners in Japan, males of this species are easily distinguished by the markings and the shape of embolus and RTA. Females are also easily distinguished from those of Japanese congeners by the epigyne having scape.

This species is quite unique in having an epigynal scape, and male leg I is rather long for this genus, while other somatic characters and male palpal characters are well consistent with the generic characters. Therefore, I place this species in this genus. The epigynes of this species and those of other congeners have a cavity in posterior part in common. Though in this species a cavity locates on the apex of scape, it seems homologous to those of other congeners.

This species is possibly important to reveal the function of genital structures and the process of genital evolution in this genus.

Etymology. The specific name from Latin *falco* meaning a falcon is a noun in apposition, and refers to the white marking on the male carapace resembling a flying falcon.

Acknowledgments

I wish to express my heartfelt thanks to Hikaru Ishii, Tokyo University of Agriculture and Technology, and Kazuki Yamamuro, Amami Wildlife Center, for offering invaluable information about the occurrence of the new species.

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Received February 20, 2016 / Accepted June 2, 2016